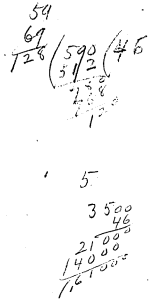
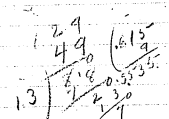
Notebook, N-00-12-05



53 - to MnS made by Rufus
~~Eq~~ in atmos of H_2S - gives
gave nothing with F_2 —
I have been trying it and
have made ~~it~~ it with
would not and it is —

Cant make it go either
way it gives 4 or
500 Mah on O or H
due to Sulphur



54 grid Empty 4.9
full 1.2.9
9 pts Hyp 4 pts Hyp
fields

5.53 Hyp

good deal Came out
on H-gaming
Dont Dredge up
again only 1/3 what
Asked

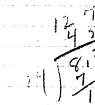
53°

9th Empty 4th -
full 12:7
H₂O - 9 pts Pbgs 5 pts

5:2 / H₂O

good deal Corn
out on H grazing

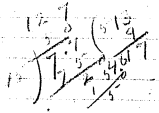
Don't Ox up regular as
Should 1/3

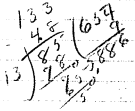


56 — grid Empty 5
filled 1 12.17
Hg0 9 parts Pb 6 parts
flake Hg0

4161 Hg0

Come out beaded on
this. Comes there
was more pbg.





57

qrd Empty 4.8
full 13.3
Hyd 9 pts Phyo 4
Electrolytes Phyo —

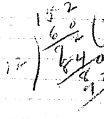
5.88 Hyd

All Comments
Dr Gasmy

58 grid Empty 6
full 15.2
H_2O 9 pts Pb 3 pts
flake —

6:59 H_2O

nearly all came
out with
grossing



59

grad empty 5.4
full 13.3
Hgo 4 pts Celsius 200 III 4/15
Mg Cinnabar grad

all came out at
once when it
grad melt

20 is the old Hg Carb plate
Where used Hg flat + several
fillings, the standards

This plate on Oxdg is good
for 1300 mah — Gat towards
last density above 100 causes
slight graying on Ni prong
100 daylt camps gas at 1300 mah,
+ I think last dose given
plate was never reduced
after then plate will
give more + even if not
so, a lower density will
give more than 1300 +
Dec 5 1905 TEG

60 – Ferrous Carbonate
dried in CO_2 gas
ø grid Empa 4,15 –
full 8,13
7 pts. FeCarb. 3 pGyp —

Vanadium in Carb plate
destroyed red by H in Cell -
but 0x dyes up with Hg
plate against it NO VALUE
with Pt - goes down to 044
Closed 46 Open —

Ch Cathode Carbon plate
against Hg | 78 closed
190 open | 1 min
in 5 min 72 closed 84 open

The Richman holder was
all black showing that
carbon is somewhat
adsorbable in Hg/mol —
10 min 66 closed / 80 open —

Ten in Carbon

82 closed 99 Open

½ min —

5 min just same 450 pm

	closed	open
450	82	99
455	83	96.5
5	82	98

Natural Uranium in Carbon

plate	closed	open
507	82	100
513	74	90
520	68	82

Bismuth Nit in C plate

.44 closed 50 Open

Nit Cobalt in C plate

	closed	open
1/2 mm	62	82
5 mm	57.5	64

Uranium Oxd acts as
fair depolarizer but
not for any great length
time & diffrnt salt
urans Neutral Nitrate gives
diff results —

Co acts as good depolar
but only for little while
& overload it has great
damping or reducing
plate 1300 to reduced
12 bruskfinds Nut Co
it limit to like 50 ma
or Ox —

Bismuth acts as depressor
a little while —

Dec 8 1900 7 a.m.

Nickel + Cobalt both act as replacers of H_2O as reducing agent from Fe

Iron + Cobalt as best Nickel next – and Iron from Ferric reduced to Ferro-Ferric as next owing to weight etc as is probable that Co will be cheaper than Ni depending on deposition

Iron compared to Co + Ni as quite poor –

I have made 3 Carbon plates Each soaked in following brushed 3 times with 1:20 Solution

3 plate with strong Ferric Chloride.
3 " " fairly strong Nickel "
3 " " nitrate strong Cobalt "

OVW

Saturday evening the 9 plates 9 put on Current,

2 of each reducing + 1 oxdg

Wt of dried Cobalt plate shows 4.6 grms dried chloride
Nickel plate shows 7.4 grms dried Chloride -

On pulling on Ct The 2 oxdg Ferric chl Colors one red — great many sprouts the one Redeg dont Color + not many sprouts — but ox plates yes Redeg not

The 2 oxdg Co plates browns Sahlm very little some sprout + both yes — The reducing plates has little bubbles Coming out but dont yes on the backsides

The 2 oxdy plates of Nickel both gas in Ni holder. Solution clear – sprouts moderate Ridge plate has more sprouts Sulphur Clam No gas at all –

42 with new Ni plates 3 gms Ni on dischy about 300 mah – both clear changed to grown 9 now put them in chly solution 1 Lump + add Rec plumbs only perhaps 50 ma – all day Sunday

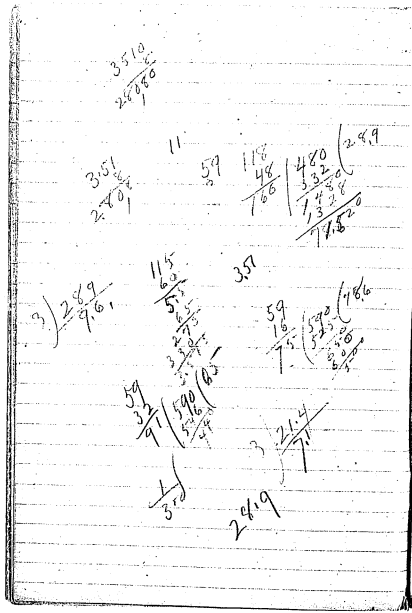
No 39 is charged about 600 Milamp hours

No 43 was oxdy when it put it on for the night 474 mah I reversed it to reducing at 6.55 pm 43 Monday (Redwood) fully has 700 mah

61 is anhydrous Sulphide of Cobalt made by Reaction by using Metallic Cobalt + Brimstone in a Crucible, powdered + screened through 200 mesh

Grid Empty 4.9
filled 10.0
3 of Sulphide
+ 3 pts of Pb_3O_4 —

freshly made Neutrals showed have been 7 of Sulphide —



62 Sulphides of Nickel in powder found in Ald. Battle
grid early 6—
Hall 11.5—
7 pts Sulphide 3 pts graphite

3.51 Ni grams

after Nitric acid heating doesn't give
Some results on par ox — 20 or 30 mah —

63 = Sulphide Cobalt made from metal + brimstone in Crucible Coy Refin—

Grid Empty 5.12
Filled 13.

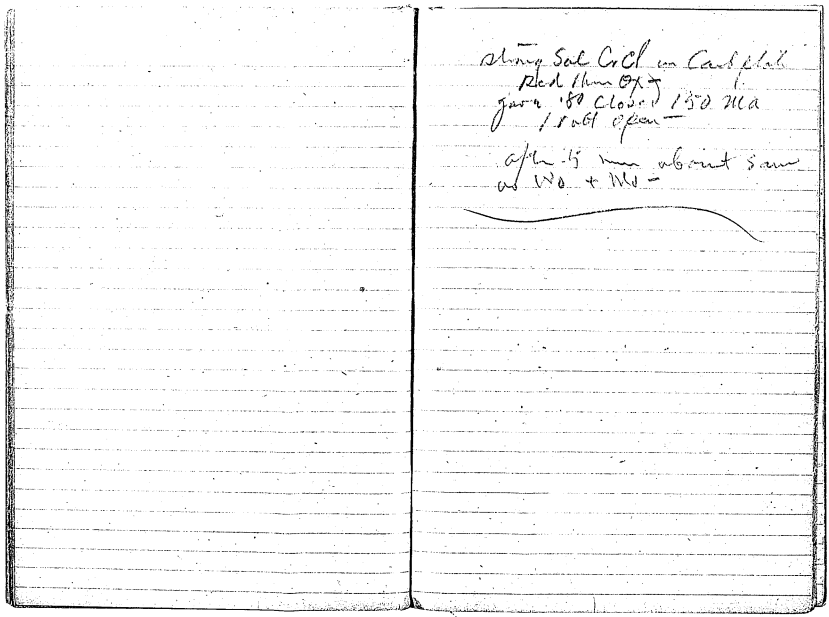
7 pts Sulphide 3 pts graphite

Tungstic
~~Mo~~ reduced hydrate deposit
Hel + pt on Cu plate
Rich from Oxdyd gave 110 ma –
.44 V. closed .16 open
after 5 min with
Iron as Oxdyde Electrode
Solution was weak

Molybdic acid + Hydriodic Acid in
Hydrochloric Acid Eq Ct (on Carbon plate)
gives at first
{ 200 Ma .80 V closed
{ 1.02 V open

Solution was weak

after ½ min .140 closed
.100 ma — .58 Vdt. open


stirring Sat CuCl on Cardy plate
Red Thin Oxy
Jan '80 closed 1350 Hrs
1 to 61 open
after 15 min about 5 cm
of NO + NO2

Ferrous Cl with Ferricy
K put in after in Carbon
plate

170 ma - .74 V closed 104 open

5 min after Closed .47 - .68 V open
105 ma

64 + 65 is Sculpsit Michael
Too much shadowing
Ruffn
7 pls. MS. 3 p 690

Lab – Disulphide Nuckal tm Carb
+S mCmerable mudstone Rufm
grnd Empty 4.9
Shell 10.13
7 pts MS 3 Graphite

67 - 3rd Run.

1025	223	95	118
1030	203	86.3	108
1047	150	63	102
1153	132	56	100
1114	100	42.6	94

off

Am going to reduce it

4th Run

443	224	86	117
450	154	66	102
523	104	44	90
535	83	35	90.5
545	70	29	80.5
550	90	38	100
600	75	32.5	90
625			

changed Fe

off

This has improved

look forward to the test for 5th

67 Empty 4.3

Fuel 7

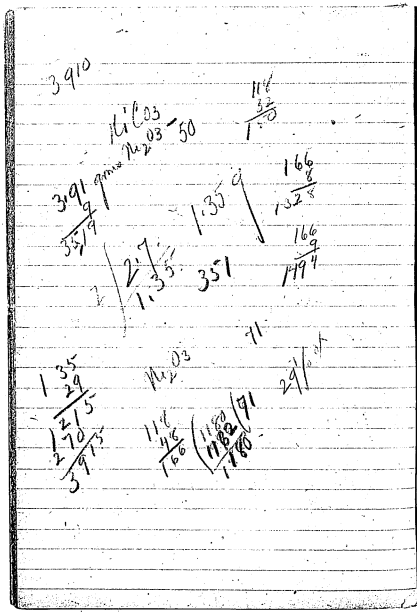
Carburetter marked.

7 pts pogo 3 pts

time	a	Vcloud	Vapour mah.
925	260	96	123
930	220	84	106
935	210	74	103
940	183	71	101
945	178	66	98
950	160	58	94
955	140	52	92
10 —	128	46	92

Been on all night Good a- lot of

815	265	98	130	
820	237	88	114	
825	222	82	110	
840	170	63	106	
852	150	46	102	
9	100	37	85 to 100	134 mah



ground together both
charts 67

66 – Carb Ni 7 pts, Pb go 3 pts
grid supply 4.8 –
filled 7.2

Thes works OK only trouble
is the bulk ——

351 milgms O available –
add O to .3 for amp hours
showed get little more than amph

Time	am	Volts	Vopen	mA
827	265			200
832	238			20
837	228			40
842	220			66
853	174	64	103	101
900	160	59	101.5	120
905	148	54	100	132
910	135	52	82	143

off –

on recharge stands 400 ma at 15th –
about 6 amount 7½ grid

68 2nd time –

1014	220	80	102	
1023	195	68	84	changed transfer new one
1024	235	86	120	needle of Valtrols stuck
1030	212	74	108	
1040	178	66	108	
1045	160	58	104	
1055	140	52.2	80	return 2 sec inlign 104
11 –	132	48	86	114 max –
1107	122	45	84	125
				133 off

3rd time

325	260	111	140	Been on Low Oy Lt
337	193	82	126	24 To 36 Hours –
345	162	69	108	
4 –	140	59	94	
405	127	54	92	
415	113	48	84	
430	90	38	74	Off

69 Carb Nickel fenely ground
with plugs

Grd Empty 4.9
full 7.9
3 of Carb .3 plugs

70 grid 4.8
drilled 8.1
Cobalt Carb 7 pts. pb/zn 3 pts

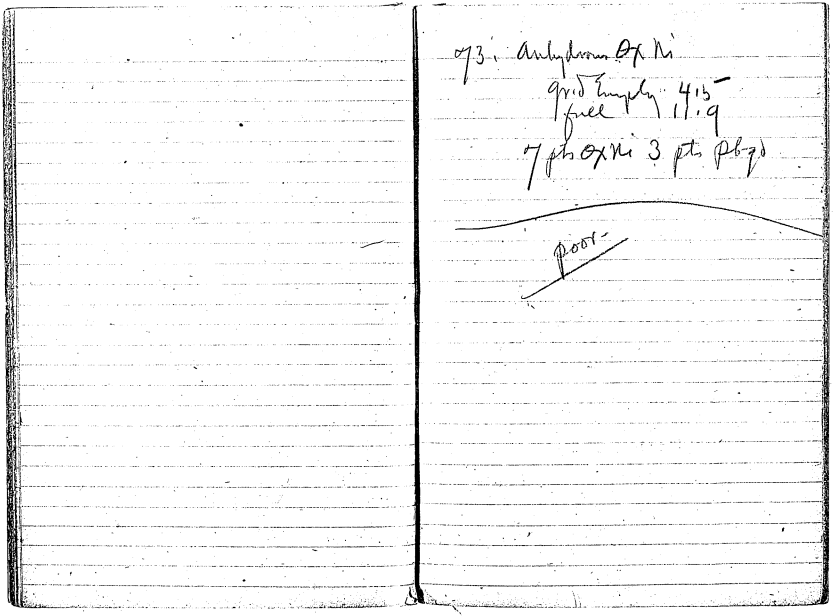
71 grid Empty 418
filled 8.5

7 pts of Ni Sulphate dehydrate/pantoate
to follow + 3 pts. proprietary

1.85 metric of all water was off

2 3.7 / 1.85 = relative Ni

72 nitrate Ni heated in Evap dish till black nearly all nitrous fumes off.
Empty 5.1
Full 10.5
7 pts of Chloride Ox. 3 Graphs


073. Anhydrous Ox Ni
grid Empty 4.15
full 11.9
7 pts Ox Ni 3 pts Pb-Zn
poor

74 grid Empty 4, 5
full 8.9

ppm - 1/2 acetate Nickel 1/2 ppb 0

4:4 of mixed stuff in
Reduced acetate flow of

937	223	80	106
944	180	65	90
953	164	58	82.4
1006	155	55	78
1019	142	50	73.
1020	64	23	36

Moistened with Koh —

75 — grid Emp 6.12
full P 10.1

Acetate Nickel 3.13
pBqo 3.13

Original not weighed 6.16
after washing 6.19 —

Burn on 500 mah resting the patient for 2x

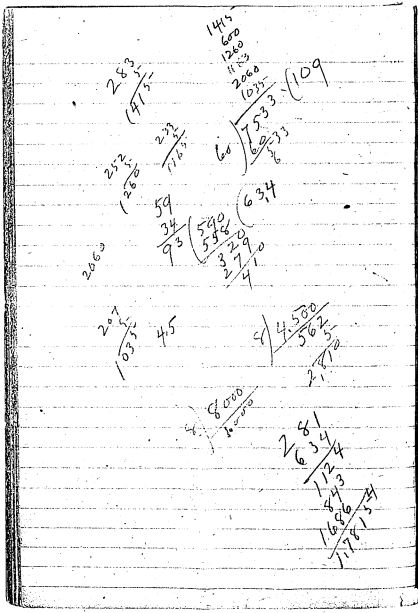
910	238	84	118
917	200	70	102
930	170	60	82
935	125	44	70

2nd

240	192	82	120
253	160	68	104
310	145	62	96
317	115	48	78
320	160	68	84
327	128	54	76

Changed to fresh Fe

off



7/6. grid Emp 4.5 — full 9

Dried Nickelhydrate, gentle heat on brix oven steam plate,

Nickelhydrate 5 parts
Kp 690 — 3 pts

Moistened ± KOH — Orig batch weighed dry 8 after wet 9 gms

Nickelhydrox 63.4% —

4.5 gms in grid of which 2.85 Nickel oxide

1.78 grms Ni metal leaving
Use KOH ent,

160 ma at dont go in Ox

1020	292	104	
1030	273	98	132
off 1037			
1050	260	92	128
1055	246	88	123
1100	220	80	112
1110	208	72.4	106

76

1015	207	74.2	106	109 mah good
				2nd time —
	on other tubes			new Rea's
910	200	100	112	
915	188	91.3	112	
920	182	91	112	
925	Has been open during			then 5 min —
	Enclosing	Reads		
925	210	90	112	
930	200	84.3	118	
935	197	82.3	108	
940	193	82	108	
945	190	80.2	108	
950	off for these		5 min	wrong plug —
950	201	84.2	112	
1005	187	78.3	106	
1010	183	77	104	
1020	179	76	102	
1025	177	74.4	102	
1030	174	74	100.5	
1035	173	73	100	
1045	170	71	98	
11 —	160	168	96	306 mah —
1108	216	92	124	— put in new Fe 1108 —
1120	120	50	80	
1122				off —

77. Nickel Sulphide from Acetate Ni
grid Empty 4.1
full — 8.3
1/2 NiS 1/2 pbO —

Sulphide was a little moist when put in

125	232	86	118	
130	150	54	94	
130				Charged Fe but it made it no dif —
131	110	39	80	off — going to Reduce it + ReOx —

232	200	86	112	
240				209

· 78 Ox. only OX. 7 pbyo 3

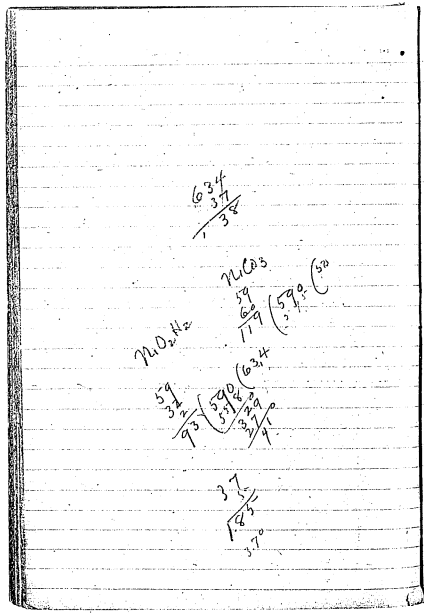
· Grid with thin Ni punched with needle holes piled hand

Empty 3.1
filled 12.9

· wet with KOH —

on 340 ma ox slopes — 3 × 4 mm —

	a	Vclad	Vopen	
115	250	81	122	
120	173	63	90	
123	107	56	152	off —
				2
225	215	91	114	
230	110	84	60	Off ng



79 grind & ppt 4:1
full 10:3

6 Nickel Carb 4 graphite

The Ni Carb w first ground very fine
then Graphite put — & ground together
dry very fine finally wet with
Acetone ground long time so
whole looks like pbpo stuff —
no blue Carb can be distinguished
under micro — Ni sheet over molybdate
Put in 1240 no Ct which will be
on at 1 about 105 ma —
Time slow Ct as cliff and full
unit by grid knew —

3.7 gms ~~Carbon Nickel Graphite~~
~~total of mixture~~
50% wet nickel 1.85 gms.
Wet Ni —

8—	202	74	122
807	158	58	110
812	157	59	108
820	152	57.5	107
825	150	56.3	106
830	150	57.2	102

837	100	35'	60	2nd Run
1140	175	76	118	
1155	160	67.6	106	
12 –	155	66	104	
1220	149	62.4	97	
1250	128	54	87	
1 –	120	51	78	off

80 grid Empty 4.8
(filled) 10.1
7 pts wet $Na_2O_2 + H_2O + 3$ pts Na_2O_3 peroxidized — by Hypochlorite

Works weathered Chg to futuran dioxide
The stuff was not Co.

603	252	92	118	
610	200	70	110	
615	183	67	108	
620	175	64	108	
625	160	57.6	105@06	
630	140	52	102	
631	170	62.2	120	putrumescite
635	120	43	90	
		off		

2nd Tun

930	220	93	120	
935	190	80	107	
950	163	70	106	
10 —	153	66	106	
1010	145	62	106	
1015	142	59.8	104	
1030	130	55.3	102	
1034	120	51	100	off

81 phosphide Ni. made by Ruth with Ni + phos, heat

grid Empty 4.5
full 11

7 pts phosphide 3 pts 5690
mixed duly

It shows that it works only have to get phos soda bulb guess

210	200	86	110	
1.25				ng

82 – Anhydrous Chl Nickel –
Reformed it to "Bunn" 9 grams
grid Empty 6.10
filled 11.9
7 $NiCl_2$ 3 H_2O 90
Mixed Dry

45% Ni — 1.82 grams Ni.

T	170	42	90	
1	225	94	117	New Fe.
110	190	81	104	
115	185	78	102	
120	180	76.2	102	
125	175	75	102	
135	172	72.8	102	
140	170	72.3	102	
218	102	40	70	off –

11.9
6.10
5.1

59
7.0
1.2 9 | 5.9 | 0 | 45.
7.4 0
7

20.3
16.2 4.0
4
1.42

88 grid Empty 4.5
filled 9.9

Dried hydrate Nickel 9 pts 1½ pts
photographers pbqs —
afterwards wet + ground until it
all looked like pbqs —
Weighed 12.2 wet — d gave af 1.7
grms —

Large quantity fine material
facks but + it gaves at once —
Ng - all Cames out
grid.

84— grid Empty 4:8
Quell 18.5—

6 pts dried Nickel Nitrate
1 part phate pbgo ground together
finely while moist with KOH.
2 phate flake pbgo mixed with
above 6d fumes

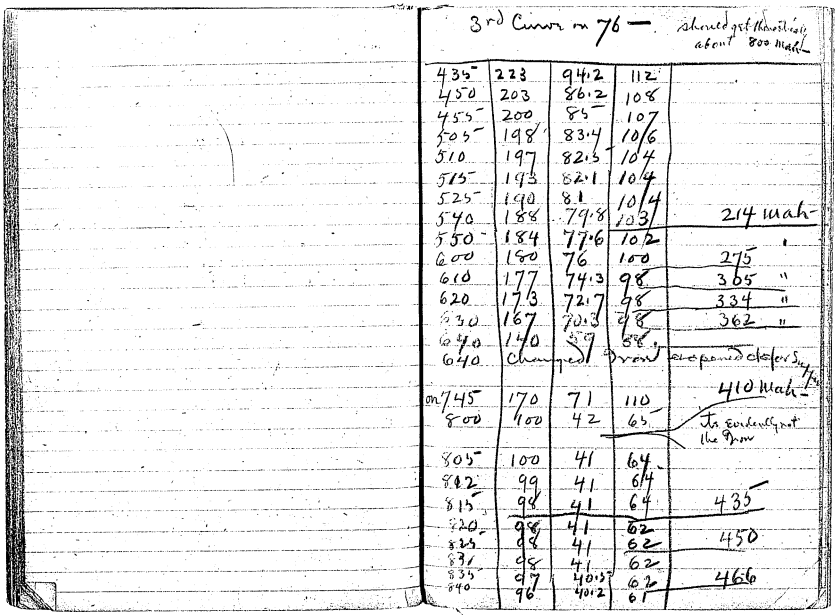
No fine material falls out
dust gas — Thus shows value of
flake pbgo for holding fine
stuff — not for porosity | or
Contact as a cement 83,

with Cement all comes
out —
No

85 – grid Empty 4
full
6 pts Ni Hydroxide Dried
100 on 200 mesh
1 pt photo pbyo
2 pts graphitized.
Photopbyo mixed wet (KOH) with
Ni by fingers & formally
graphite used — mixed
fingers.

Some comes out & disgusses

915	212	90	118	
923	186	78.5	106	
930	177	74.2	103	
940	176	70.6	100	
950	167	70.5	100	
955	163	69.8	98	
10 –	160	69	97	Had to take it off evaporated grid —



3rd Curve on 76 — showed got through easy about 800 mah

435	223	94.2	112	
450	203	86.2	108	
455	200	85	107	
505	198	83.4	106	
510	197	82.3	104	
515	193	82.1	104	
525	190	81	104	
540	188	79.8	103	214 mah
550	184	77.6	102	"
600	180	76	100	275 "
610	177	74.3	98	305 "
620	173	72.7	98	334 "
630	167	70.3	98	362 "
640	140	58.7	88	
640	Changed	Drive		2 pound clefers 5 1/4
				410 mah
on 745	170	71	110	
800	100	42	65	Is evidently past the Grade
805	100	41	64	
812	99	41	64	
815	98	41	64	435
820	98	41	62	
825	98	41	62	450
830	98	41	62	
835	97	40.5	62	466
840	96	40.2	61	

76 Continued

845	93	39.3	60	481
855	88	38	58	496
900	83	36.5	55	
910	60	22.2	44	517 Malt

Off

on all night about 50 m

145	232	98.3	120	
153	203	87.8	107	
300	177	76.7	101	241
310	170	72	96	
310				new Arrow
310	192	83	116	
315	110	47.5	60	
320	105	47	64	289
345	97	42	60	330
350	96	47	60	
355	94	41	58	346
4	92	40	57	353
410	90	38	56	
427	74	32	50	373
430	59	26		
440		Zero		

86 grid Empty 4.5
fuel 10.5

5 grams Ni Hydroxide dry
Moistened it spread weighed 6.4 g
after washing — 100 and 200 mesh
gas come on closing ck & some fine
stuff comes out perhaps 9 fried
it too much so it went thick
Together — No graphite —

Considerable amount
of the had been put on little
dampear (10) Hyd. stuff
dried quite a bit more
probably with the vibration

1005	210	90	116	changed Fe
1007	235	99	126	
1010	203	85.1	116	
1015	120	49	106	

off

87 - 2nd Run — good

104	308	78	114	4th pump
110	270	69	104	
115	260	67	102	
120	255	65.3	100	
137	237	60	95	
145	228	58	92	
152	220	56	90	
213	192	48	80	
215	188	47	79	mah-
225	180	46	74	350
230	178	45.2	74	
240	172	44.1	72	392
245	170	42.8	72	406
245	290	73	112	— recon from No 32
248	273	69.5	106	
250	260	66.3	103	428
255	254	64.3	101	450
3 —	247	62.7	100	470 (on old pump 3rd run 74 Volcon + 470 ma)
305	238	61	100	490
310	180	46	82	
315	150	39	74	521 — 43 W 110 ma old pump
320	150	38	74	
325	144	37	70	546
330	140	36	67	100 ma 43 V old 3rd pump
340	130	34	63	568
350	102	26	45 est	587 off

87 — grid empty 41.4 g
full 9.1

Dried Ni Hydroxen
11 hrs 100 on 200 — 6 pts
flek graphite only — 3
Dry — 3.52 grms Hydrate

Seriously of any Comes out grid — 2.23 grms wet Nickel

1017	224	94.3	120		Theoretical 1.11 amp hr
1025	200	86	110	28.428	9.6 g active
1030	199	83	103	44.89	
1037	194	82.3	106	67.87	
1045	190	80.2	104	93.54	
1050	189	79.8	103	109.33	
1055	176	74.3	102	124.54	
11 —	125	52	86	137.09	Amp hours off

87 – 28th 4th pag

245	354	91	138	
255	288	75	112	
315	262	68	104	145
340	250	65	101	251
350	247	64.5	100	292
4 —	243	62.7	99	333
415	237	61.2	98	393
430	223	57.8	96	452
450	137	35 —	70	512
500	133	34.2	67	534
503	130	34	67	538 Opened 502 to
523	157	38	75	Reenpanh on 523
535	116	29.2	60	565
545	42	10		578 off –

Off for the night to 6z increase in morning
am both pigs out,

805	65	18	40	before pulling Ct in 1 run 120 – dropped in 5 sec to about –

88 Grid Empty 6.2
full 9.9

Dried Ni Hydroxide 6 pts –
Coke through 200 mesh 3 pts –
coked dry Ni also thro 200
ng Comes out.

89 — grid Empty 415
full | 9.9

Dried Na Hydrox. Ac — 6 pts

Coke 30 on 60, 3 pts

pkd wet.

Drive of the fines off
Connect cont,

1118	235	99	120
1119	200	84 3	106
1132	85	36	off

90 grid Empty 4:7
full 9:12

Ni hydroxide not quite dry — 6
when powdered got damp —
Coke through 30 on 60 mesh 3

gases nearly full apparently when
1st put on — nothing comes
out,

1133	228	94:8	117	
1140	180	76	102	
1153	75			off

91 grid Empty 6.2
fuels 11.2

Mi Hydrocarbs very dump 6
graphite 3

Scarcely any Comes out
good rattle too much for 130 Mc
to count —

1155	214	90.7	109	
1130	177	75	90	
1140	154	66	80	
1213	137	59	72	153
1220	136	58	70	
1220	210	90	114	New Grid
1230	195	80	105	
1240	183	78.3	104	234
1245	180	77.3	103	
1255	174	75	102	263
110	108	44	66	298
120	97	42.2	63	312
130	74	32	45	326
140	22	9	8	
				off —

91 2nd dia

950	227	96	120	
10—	200	84	103	
10—	×400	59	102	dummied Res 4th pay down Valley down fwd
1010	385	56.4	100	
1020	360	53	97	162
1036	320	47	93	252
1052	173	26	62	317
1108	144	22	50	~~367~~
1120	80	12	30	357

on 1st pay 92 V 12 ma a
at 12 min 1st pay 60 V .34 ma

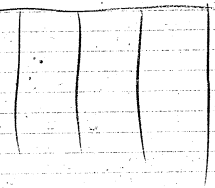
92 2nd Empty 4
filled wet 9.4
When dry 9.1

Nickel thy not perfectly dry — KOH added also.

Weighed before KOH put in 7 pts
(at 2nd damp)
Phosphate 3 pts —
Dried 9.1 on 81 Nam plate before
It didn't give when put in
Discharged — put out in
Little Pebl cut showing that,
the hydrate must not be dried
hard but only down to damp —
passed on 340 ma - a little
on 150 — all night
with all pegs out,

915	236	99.8	120	
1020	100	41	64	abt 180 mah

92



93. grid Empty 4.6
filled 9.8

Hydrated Peroxide Manganese 3
Graphite 1.5

Hydrate wet 7.2

took up moisture and KOH 20%
gave little or O Considered
Oxdy —

94 grid Empty 4.15
full 10.2

Nickelhydrate by pp in bath KOH
stirring + dry on perma plate,
Very damp when used so after
mixing with graphite is more as
wet if not more so than coban use-
used KOH as dry Industrial,
Ni Hydroxide 7 parts
Graphite 3 parts

% wise reduce on 4th batch OK
but with density less than
100 ma or than it goes slightly

95 = Wet 1/2 dried hydrated Connecticut Albany grease — mixed with graphite & worked together then dried and pared fine then when semi dry mixed with little fresh graphite & packed — grid 3/4 full only — grease fragile 4.5

		failed	95	
1213	370	94	130	4th peg.
1215	334	84	120	
1223	280	71.4	103	
1233	257	66	102	
1245	137	35	62	136 mah

96 — Sponge Ni by the Current
+ Small graphite — more at
Empty grid 4.05 —
full 13.14
only 1.3 grms plgo on grid —

1246	305	78	104	4th pan
1252	247	63	90	
1.02	45	12		

97- mort. hydrate dried only on tile
mixed with Coke. 100 on 200
pressed hard — so rock particle
Coke presses thro soft hydrate
& makes Cake —

dried Empty 4:12
Filled 7:8

Very poor —

12:07	250	60	132	
12:12	80	20	60@80	off-ng

67- 5th Test beam reduced + max 2 or 3 times, in all 4 hrs 4th play

Time	ma	V closed	V open
353	340	86	117
353	302	76.1	168
4—	190	48.3	106
405	170	44	106
410	145	37	103
420	120	32	100
420	130	33	

Tube Fa off

98 — Fe 42 mi —

1252	317	82	112
105	268	70	102
110	262	68.5	102
120	253	66.4	100
130	246	64.3	98.5 — 169
145	122	32	60.5 — 215
150	110	29	60.1
205	74	19	40 — 660 — 247

2nd Run

850	332	83	114	
900	294	74	104	
925	263	66.2	99	168
953	204	52	86	276
1007	105	26		312
1007	170	42	80	new Fe
1015	132	34	70	332
1020	120	30	60 @ 5	342
1035	74	19		366 — off

98 Wt grid 4.4
filled 11.2

Dried Ni Hydrate air dried.
Then moistened, thoroughly mixed out 7 pts
Graphite thro 12 on 16 mesh 3 pts
only mixed just ground.
packed wet + Rammed

6.8 of mixture in grid
4.76 Hydrate wet
2.23 Metallic Ni

99 Fehrmann 2 260 mah

1 mm closed before reading

1045	277	72	106		
1052	256	65	102		
11—	234	61	99		No 43 Had 500 mah lithium water off
1109	227	59.7	98		
1110	223	58	97		
1115	217	57	96		
1125	207	54.3	94	154	
1140	147	35.3	82	198	
1145	80	21	50	226	
1153	122	32	63		New from No 42

forgot to record

2nd Run

1037	337	83	114		
1134	242	63	84	289	
1152	194	48	82	343	
12—	172	43	74	367	
1220	75	18	40@?	407	
1220	185	47	90		Need Computer
1225	172	43	84		
1230	157	39	80.5	432	
1235	130	33	80.5	442	
1240	77	19			off

99 grid empty 4
filled 18.

Dried Ni Hydroxide air dried then
moistened & weighed out 7 pts
Graphite through 16 on 20 mesh 13 pts
pts wet & hard

Reading taken after 1 minute

9 am	374	93	130	
905	328	84	118	4 th peg
910	290	76.2	108	
915	274	71	103	
920	269	69.5	102	
925	267	69	102	
930	263	68	102	135
957	130	32	64	
1010	109	28	50@60	249 off

put on Reducing —

Second Run after reducing the ox

1005	335	84	112	
1010	312	77.5	106	
1010	Put in a ferric hydrate grid from reducing to here			
1002	250	59		
1003	230	56		4th peg
1004	150	37		
1005	107	27		put back other Fe
1005	322	80	109	
1010	308	76	104	122
1030	297	73.5	102	172
1040	289	72	100	220
1045	280	70	97	243
1055	267	66.3	94	288
1100	258	64.2	93	310
1110	530	56	80	350
1120	520	30	70	350

changed Fe over

100 grid Empty 4.6
full 12

Air dried Nickel Hydrate after wash. moisture + weighed out 7 pts graphite through 120 on 30 mesh 3 pts picked out by hand.

of the 3 98 99 + 100 100 gave the least when 154 put on 150 MA-

Remarks 26% of Moist hydrate was water, hence in No 100 Leaves 3.84 grammes Dry Hydrate leaving finally 2.43 grm Metallic Nickel on the least of any grid yet, Dry Hydrate has 63.4%

1125	157	39	80	393
1130	147	36	70	405
1135	138	34	64	417
1140	133	32.5	60	425
1150	83	21		446 off

Nos 98+99 - oxidized + the disconnected for 8 hours then put on ct again 0x dz - required 50 Mil amp hours to bring them back to gassing on 0x showing that loss, both gained the same & remained same - to about 10% reversion -

probably
100 is the best of the 3 - 98 99+100
But the difference is so small that probably all of Exactly picked under above Conditions would act same

100 has 7.14 grms of mix of Hydrate + Pb3O4
99 " 6 " "
98 " 6.14 " taking this in Consideration there is no difference in the age of the graphite flakes of Nos —

76-

1.78 grams NaI 5th Run — Beam Reduced 4 ox
twice — 11cm in all night
60 ma 4 all day 100 ma —

427	347	87.3	113	
455	267	68	96	143
505	257	66	92	186
515	247	62.5	86	224
530	222	56.3	82	287
540	204	52.3	75	327
550	190	48	74	355
6—	93	23	45	
601	197	49.6	86	New 9cm in N°43
610	157	39.3	70	408
620	139	37.3	64	432
630	139	36.2	64 ?	455 — 100 ma on 3rd day
640	133	33	63	477
650	105	26.5	52@60	497
700	10	3		500 max —

This is better or as good as 87
as at these most gain achieved Ni in t,

101 Grid Empty 4.3
full 10.4

Nd Uranium pp 6oz Potash, Yellow
Compound, Dried but still not
perfectly dry —
Graphite on 30 7/3 pts
pld. only — Redag at first.

Don't seem to work well as Neg Element
Salts go right down — perhaps
mould be oxidized badly

102 grid Empty 3.1
full 9.1
Molybdic acid 7 pts
Graphite 3 pts
20 m 30 –
Pkd dry

Pentacem work well as a neg Elect

103 – grid Sample 61
filled 12.5
Tantgstic acid 7 pts
Graphite 20 m 30 3 pts
pkd okay =

Dont work very well as Neg Elem
best better than Ur or Md,
yet all 3 work well in Carbon
plates, Espaly Ur

104 grid Empty 3:17
full 8

Dried ord temp Ferrochrome
7 pts
flaked Graphite 30 on 30
3 pts
pkd dry —
a little comes out of grains
some on 150 on surface

Dont reduce worth a cent
quoted from the metal

after reducing for 5 hours
it only showed a slight reduction
running down in 5 minutes
Showing that only ferrous
oxide is reduced to metal &
that ferrosilicon are practically
unreducible to metal in
alkaline electrolyte

.05 g Indigo – dark red but apparently absorbs Oxygen – in grid

Grid Empty | 2.9
Filled | 5.5?

3.5 g Indigo
1.5 g Graphite –
pked Dry

106 Bi nitro Benzol (Mutka) Crystals,
grid empty 3
full 6.9
Benzo benzol 3.4
Graphite 20 on 30 1.5 —

It acts as an oxy giving element
.8 Volts with Zinc —
S S S
| | |

Evidently there exist a vast field in the organic line for oxy atoms & telephalogens
Hoop-la!
S

F_2 element

1st peg	.36 V	for 20 minutes	20 ma —	
"	1.32	at 6.25	½ hour —	
"	.30	6.50		
	27.5	7.50 —		

S S
| |

It was over oxidized about 15 Hours
to one of graphite grey appearance with organic and
left impedance from 103 to 140-

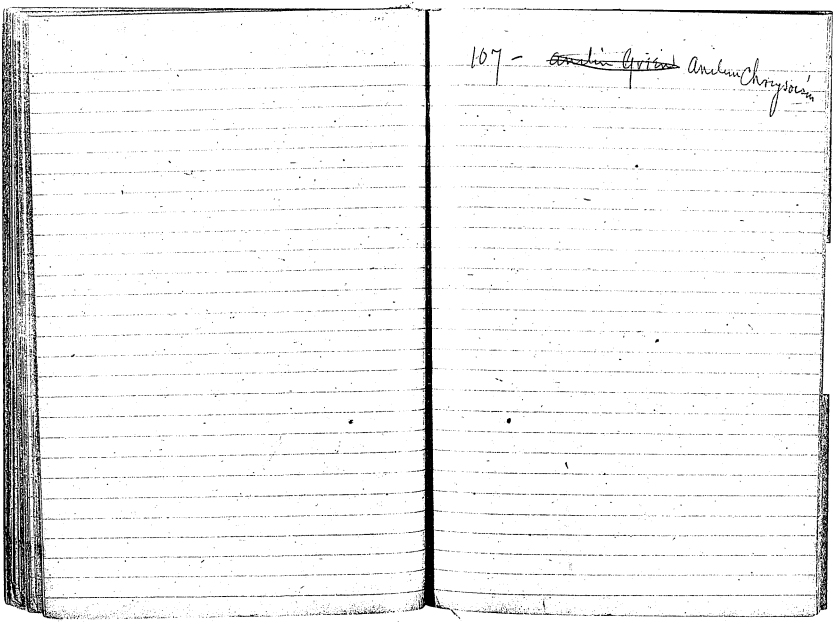
76- after changing how I ran

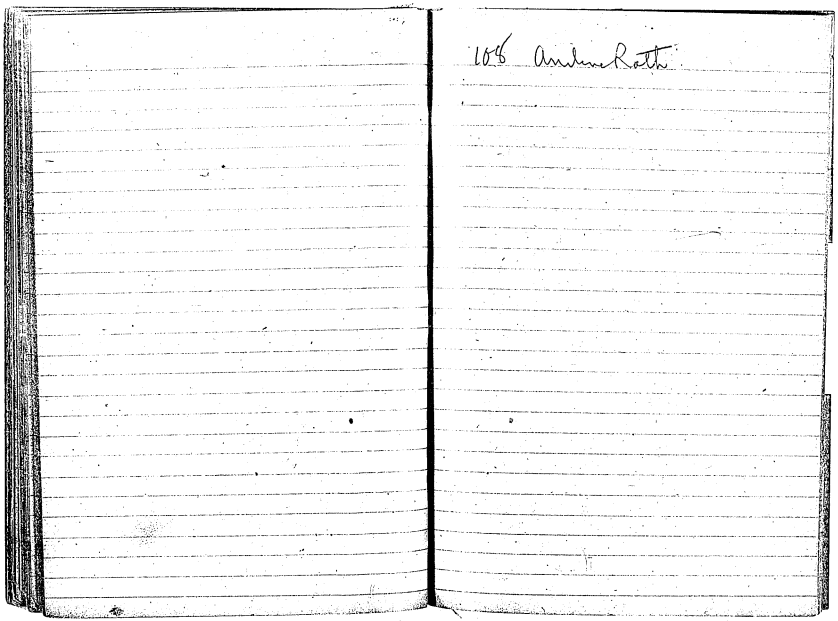
Charged + discharging 5 hours

750	295	74	110	
800	250	64	97	
815	213	54.3	84	
830	189	48	76	
830	210	79	112	changed Fe.—
842	280	61.3	104	
900	264	66.5	102	284
908	150	38	70	311
915	086	from 908 to 915 — on 915 —		
920	120	32	70	321
925	120	31	65	331
930	120	30	65 est	341
935	120	30	—	351
940	143	36	65	362
953	130	33	62	391
1000	106	26	—	404

off

This shows some loss
The watts are not so good
+ there is apparently 20% loss of amp —


107 - ~~Caelius Optat~~ Aurelius Chrysosto


108 Anselm Roth.

109 – 3rd Run

930	390	94	136	
935	212	54	117	← put on 2nd pag
936	100	87	120	
937	56	102	121	1st pag
947	53	93	114	"
10	40	66	86	" 46 matt

3rd Run — 109 – 1st pag

908	68	112	130	
915	60	106.5	114	7.4
922	59	102	112	14.4
930	57	100	111	22
935	56	100	110	26.4
940	54	97	109	30.5
947	52	94	106	37
955	49	86.5	108	
10	44	77	104	47
1008	34	60	84	52
1010	30	49	64	53 matt

147 Run — 1st pag

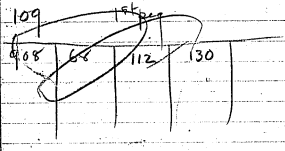
3	70	127	131	
308	63	114		
817	61	107	114	
325	58	104	110	26
843	22	40		36
420	8	12		47

109 – The old blue pp made by anilin oil in hot water + Chloride Potash – Absorbs O quick + gives with Fe +90 Volt steady –

Grid Empty 3.5
full 7.2

Primo 3.5 pts
Graphite 2.0 on 3.0, 1.5 pts.
Left all night on low amps

818	303	76	112	
820	234	58	106	
825	142	36	85	
830	55	15	40	
	2nd	t		
140	290	64	112	
145	180	47	104	
150	162	40	102	34
155	132	24	102	* put on 1st pag
155	40	82	104	
235	15.5	22.5	40	



110 to Amidon Methyl Violet

111 to Amidon Yellow

112 to Nitrophenol

No 111 amidine Yellow — blue acid 2 grants out Like 111 Nitrosamine

833	230	57	108
835	135	34	100
840	50	13	40

No 110

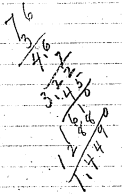
842	255	62	110
845	50	11	

111 2nd Class 1st pair

1041	64	117	130
1045	58	104	114
1025	54	97	111
1033	47	84	106
1050	22	46	66

20 minutes

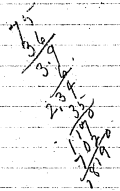
off



113 grad Engels 3
filled 7.6
7 3 [redacted] Fem & Chi [redacted]
[redacted] pbgo —
very little squint + Chat proceeds
Volts —
Rt leg right 1.44 grms Nict from
after 1/2 hour
No gait + scarcely any legs
Obs at out
with 94 ni

550	240	58	86	
555	90	23	36	off

now ex till 8 goats
Quppy



114 -- grad Empty 316
full 715

Ferricchl only 6
pbqo 47

OK .82 gram Wet Iron

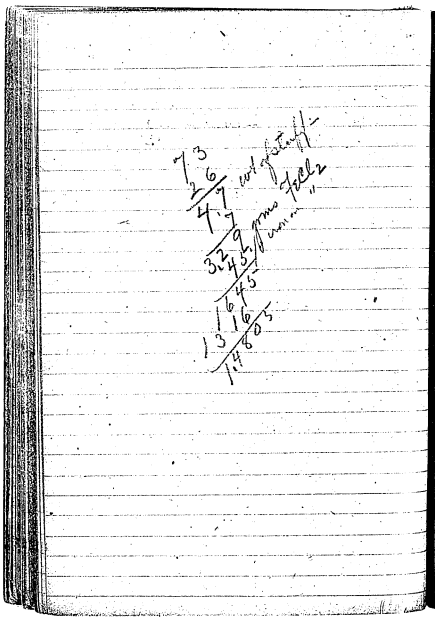
Considerable gas after 1/2 hour a large quantity keep — gas may be due to Leakage of Iron

76 Ni

6 —	320	78	110	
607	200	50	66.	
616	175	46		took off —

Now of 600 ma till 9 go to Dapper

Remarks — of the 4 grids 13 14 15 & 16 14 is the only one that has any Capacity — see this is just like 16 there must be something in packing 16 is not for the no good — 13 & 15 seem to have no Capacity at all whatever — must be due to wrong pour in 14 & 16 have most whatever — must be due to wrong pour in 14 & 16 have most whatever — must be due to wrong pour in 14 & 16 have most



11.5 grid Empty 2.6
filled 7.3

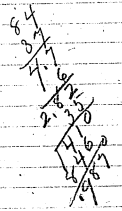
Ferrous Chl ~~[illegible]~~ 7
pbqo 3

~~[illegible]~~

148 Mef 2m

No gas after 1/2 hour but
Carbon dioxide bags large
Size —
not oxdzd

1137 | 258 | 65

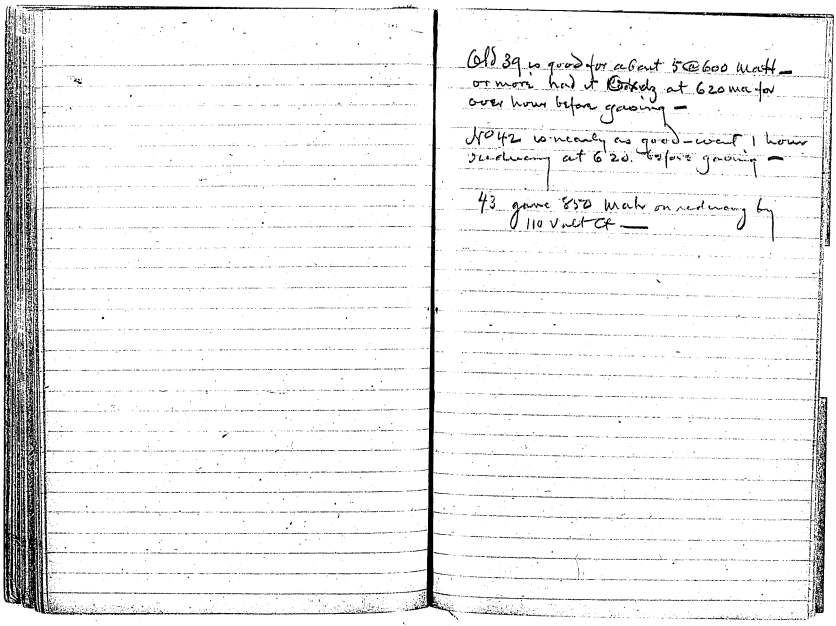


116 — grad Empty 3:7
filled 8:4

Fm KCl Chloroph (Attby) pb 6
pb 90 pb 4

gases attend ½ hour —
Lots fm leg — Solution
Little Color

· 98 grms Mat Fm
not oxd



Coil 39 is good for about 5 @ 600 watts — or more. how it [illegible] at 620 ma for over hour before gassing —

No 42 is nearly as good — went 1 hour 20 minutes at 620. before gassing —

43 gave 850 watts on rectifier by 110 V mains —

117 Naphthylamine —
Empty 5.9
filled 8.6
3.5 nap
1.5 graphite —

118 Naphthalene —
Empty 4.3
filled 7.3
3½ naphthalene
1.5 graphite.

119 — Naphthalene treated dil
Nit acid.

No 43 Fe 98 Ni — 4th peq —

1033	340	96.2	126	
1050	347	85.5	124	
11—	303	80	112	
1113	273	72	103	
on 131	305	80	112	
216	250	66	102	
230	232	62	97	
248	128	33	70.	
248	180	48	106	Changed Ni
300	180	47.5	103	
310	180	47	103	602
325	178	47	101	
335	178	46.3	100	676
345	176	46	98	
355	174	45.5	97	736
405	173	45	96	764
427	168	44.3	94	836
439	163	43	91	848
452	157	42.5	88	910
5—	156	40	86	930
515	139	37	82	966
543	78	26	50	
545	222	60	94	new Ni 1028 — with
555	180	46.3	75	1053
610	132	35	66	1092
632	87	24	50	1182 off —

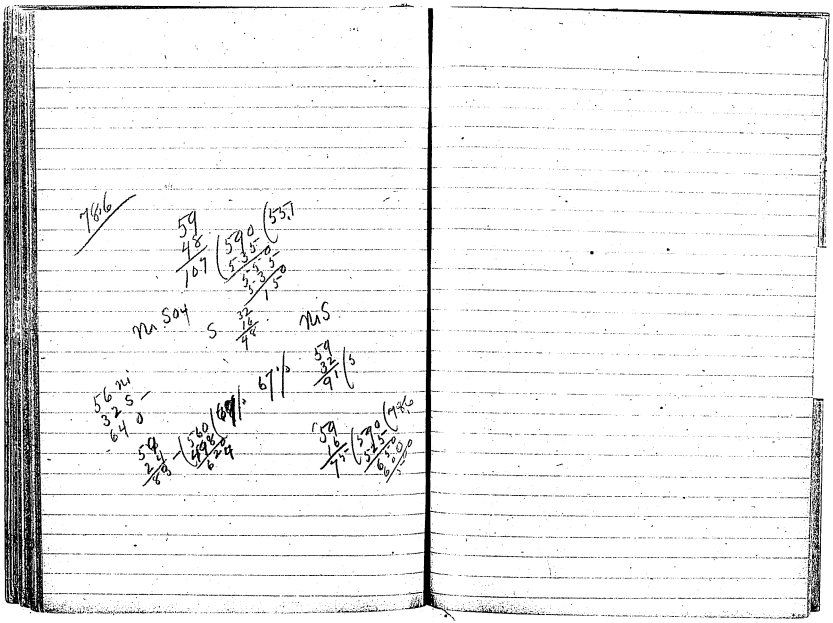
Left both on all night on Vaclume

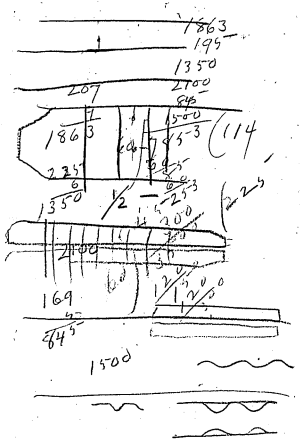
This morning at starts at following which is surprising

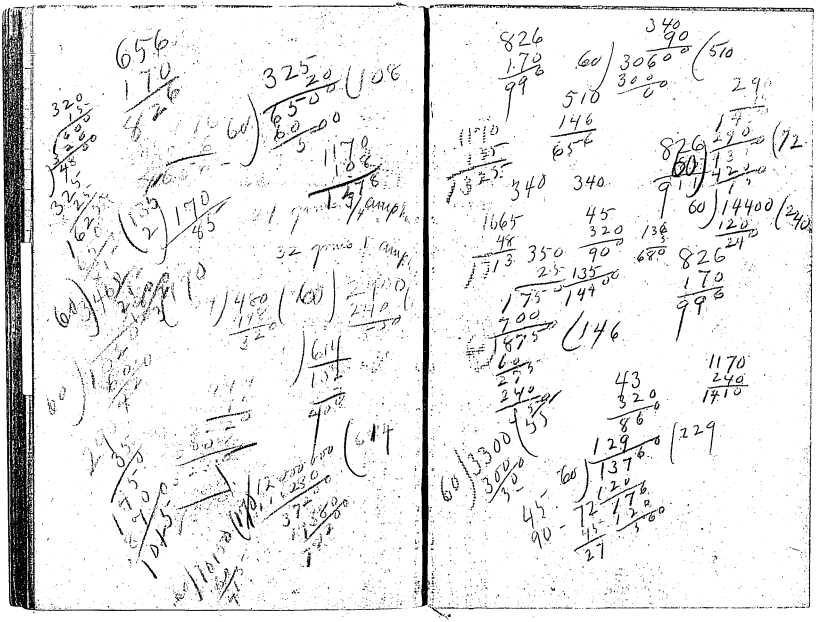
745	175	46.2	75	
752	170	45.3	72	This is a phenomenon
8—	172	46.2	74	1246
825	172	46	73	
840	164	42.5	70	
9—	123	32.5	66	1335
920	62	17	40	1365 off

On again

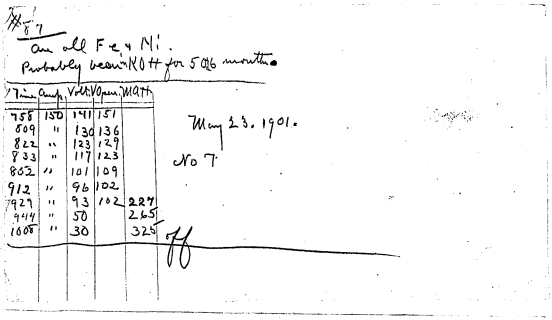
1030	100	26	60	~~off obliquely~~
1045	60	16	40	new niched
1045	222	57.8	80	
1050	202	53.7	76	
11—	175	46	72	1405
1120	128	34	62	1455
1135	87	24	50	1481
1208	51	14	40	1514




1863
195
1350
2700
207
1863
114
1350
2100
169
845
1500



[ITEM FOUND IN BOOK]



87

An all Fe + Ni.
Probably began RO H for 5 or 6 months.

Time	Amp.	Volts	Vol.	Amm	Watts
758	150	141	151		
809	"	130	136		
822	"	123	129		
833	"	117	123		
852	"	101	109		
912	"	96	102		
1927	"	93	102	224	
944	"	50		265	
1008	"	30		325	

May 23. 1901.

No 7